

Amendments to the Specification:

On page 86, line 24, please replace the paragraph beginning “In certain applications, the color of the individual particles” with the following amended paragraphs:

In certain applications, the color of the individual particles are used to identify and quantitate specific types of analytes. For example, in image cytometry applications, it may be of interest to identify and count different types of cell surface antigens or the like by detecting the number and color of different types of particles attached to the surface. For this or any other related type of multi-analyte detection, the size distributions of the different particles need to be kept as tight as possible. The average particle diameter of the particle preparation should be chosen to provide the desired color of scattered light under white light illumination, using an average or “mean” particle size that is as close to the size midpoint between the mean particle sizes of smaller and larger particles which will be used in the same application to produce different colors of scattered light. A population of specifically detectable metal-like light scattering particles is formed from at least one light scattering material, said particle comprising at least one additional material on its surface to provide chemical stability and an ability to said particle to bind to an analyte, wherein said population of particles is adapted to sufficient homogeneity in size so that one or more specific light scattering properties of the individual particles in said population are similar from particle to particle. In this fashion, the resolvability of the different types of particles by their color of scattered light is maximized.

In more specific embodiments of the invention, a population of scattered light detectable particles include:

a) a population of particles that are formed of a mixed composition comprising a metal-like material as one part of the composition;

b) a population of particles that are formed of a material selected from the group consisting of metal, metal compound, metal oxide, semiconductor, and superconductor;

c) a population of particles that comprise gold or a mixed composition of gold and silver;

d) a population of particles that are composed of silver and a magnetic or ferroelectric material; of gold and a magnetic or ferroelectric material; or of a mixture of metal-like materials and a magnetic or ferroelectric material;

e) a population of particles that are composed of gold with a surface coating selected from the group consisting of polymer, protein, nucleic acid inorganic compound and organic compound, base material molecule, binding agent, and wherein said particles have a diameter of between 10 and 50 nanometers inclusive and produce a green scattered light when illuminated with white light;

f) a population of particles that are composed of gold with a surface coating selected from the group consisting of polymer, protein, inorganic compound and organic compound, base material molecule, binding agent, and the diameter of said particles are between 50 and 70 nanometers inclusive and produces a yellow-green to yellow-scattered light color when illuminated with white light;

g) a population of particles that are composed of gold with a surface coating selected from the group consisting of polymer, protein, inorganic compound, an organic compound, base material molecule, binding agent, and said particles have a diameter between about 70 and 120 nanometers and produces an orange to orange-red scattered light color when illuminated with white light;

h) a population of particles that are composed of gold with a surface coating selected from the group consisting of polymer, protein, inorganic compound, an organic compound, base material molecule, binding agent, and said particles have a diameter of greater than 120 nanometers and less than one micron and produces an orange to orange-red scattered light color when illuminated with white light;

i) a population of particles that are composed of silver with a surface coating selected from the group consisting of polymer, protein, inorganic compound, an organic compound, base material molecule, binding agent, and said particles have a diameter between about 5 and 50 nanometers and produces a blue scattered light color when illuminated with white light;

j) a population of particles that are spherical, oval, ellipsoidal, or asymmetrical; and

k) a population of particles that have a size distribution with a coefficient of variation less than 15%, less than 10%, or less than 5%.